

40. (New) An isolated nucleic acid molecule comprising the nucleotide sequence set forth in SEQ ID NO:1, or a complement thereof.

41. (New) An isolated nucleic acid molecule consisting of the nucleotide sequence set forth in SEQ ID NO:1, or a complement thereof.

42. (New) An isolated nucleic acid molecule which encodes a polypeptide comprising the amino acid sequence set forth in SEQ ID NO:2, or a complement thereof.

43. (New) An isolated nucleic acid molecule which encodes a polypeptide consisting of the amino acid sequence set forth in SEQ ID NO:2, or a complement thereof.

B 44. (New) An isolated nucleic acid molecule comprising a nucleotide sequence which is at least 90% identical to the nucleotide sequence of SEQ ID NO:1, or a complement thereof, wherein said nucleotide sequence encodes a phosphoenolpyruvate: sugar phosphotransferase system polypeptide which is capable of modulating the transport of a high-energy carbon molecule.

45. (New) An isolated nucleic acid molecule consisting of a nucleotide sequence which is at least 90% identical to the nucleotide sequence of SEQ ID NO:1, or a complement thereof, wherein said nucleotide sequence encodes a phosphoenolpyruvate: sugar phosphotransferase system polypeptide which is capable of modulating the transport of a high-energy carbon molecule.

46. (New) An isolated nucleic acid molecule comprising a nucleotide sequence which is at least 90% identical to the nucleotide sequence of SEQ ID NO:1, or a complement thereof, wherein said nucleotide sequence encodes a phosphoenolpyruvate: sugar phosphotransferase system polypeptide which is capable of modulating the production of a fine chemical.

47. (New) An isolated nucleic acid molecule consisting of a nucleotide sequence which is at least 90% identical to the nucleotide sequence of SEQ ID NO:1, or a complement thereof, wherein said nucleotide sequence encodes a phosphoenolpyruvate: sugar phosphotransferase system protein polypeptide which is capable of modulating the production of a fine chemical.

48. (New) An isolated nucleic acid molecule comprising at least 100 nucleotides of the nucleotide sequence of SEQ ID NO:1.

49. (New) An isolated nucleic acid molecule which encodes a phosphoenolpyruvate: sugar phosphotransferase system polypeptide comprising at least 100 contiguous amino acid residues of the amino acid sequence of SEQ ID NO:2.

50. (New) An isolated nucleic acid molecule comprising the nucleic acid molecule of any one of claims 40-43, and a nucleotide sequence encoding a heterologous polypeptide.

51. (New) A vector comprising the nucleic acid molecule of any one of claims 40-43.

52. (New) The vector of claim 51, which is an expression vector.

53. (New) A host cell transfected with the expression vector of claim 52.

54. (New) The host cell of claim 53, wherein said cell is a bacterial cell.

55. (New) The host cell of claim 54, wherein said cell belongs to the genus *Corynebacterium* or *Brevibacterium*.

56. (New) The host cell of claim 55, wherein the expression of said nucleic acid molecule results in the modulation in production of a fine chemical by said cell.

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57. (New) The host cell of claim 56, wherein said fine chemical is selected from the group consisting of: organic acids, proteinogenic and nonproteinogenic amino acids, purine and pyrimidine bases, nucleosides, nucleotides, lipids, saturated and unsaturated fatty acids, diols, carbohydrates, aromatic compounds, vitamins, cofactors, polyketides, and enzymes.

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58. (New) The isolated nucleic acid molecule of any one of claims 42, 43, 44, or 45, wherein said polypeptide is capable of modulating the transport of sucrose.
